

The listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

Claim 1. (currently amended) A method for inhibiting or reducing the growth of a cell, comprising:
administering a dose of a telomere damage-inducing agent to the cell wherein such agent causes damaged or shortened telomeres within 24 hours or prior to the initiation of the apoptosis cascade, or causes telomere damage followed by a transient increase in telomerase activity; and
administering a dose of telomerase inhibitory agent to the cell, such that an inhibition or reduction in the growth of the cell is achieved.

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Claim 2. (currently amended) A method for ~~inhibiting or reducing the growth of a cell~~ improving the efficacy of a telomere damage-inducing agent, in a subject, comprising:
~~obtaining an agent selected from the group consisting of a telomere damage-inducing agent and a telomerase inhibitory agent;~~
administering a dose of a telomere damage-inducing agent to the cell wherein such agent causes damaged or shortened telomeres within 24 hours or prior to the initiation of the apoptosis cascade, or causes telomere damage followed by a transient increase in telomerase activity; and
administering a dose of telomerase inhibitory agent to the cell, such that ~~an inhibition or reduction in the growth of the cell is achieved~~ the telomerase inhibitory agent enhances the efficacy of the telomere damage-inducing agent, relative to the effect of the telomere damage-inducing agent in the absence of the telomerase inhibitory agent.

Claim 3. (Original) The method of any one of claims 1 or 2, wherein said growth is aberrant.

Claim 4. (Original) The method of any one of claims 1 or 2, wherein said cell is a tumor cell.

Claim 5. (Original) The method of any one of claims 1 or 2, wherein said cell is a leukemia cell.

Claim 6. (Original) The method of claim 4, wherein said tumor cell is of the brain, breast, ovary, testes, bladder, prostate, colon, lung, liver, pancreas, or uterus.

Claim 7. (Original) The method of claim 4, wherein said tumor cell is benign.

Claim 8. (Original) The method of claim 4, wherein said tumor cell is malignant.

Claim 9. (Original) The method of any one of claims 1 or 2, wherein said growth is selected from the group consisting of hyperplastic and hypertrophic.

Claim 10. (Original) The method of any one of claims 1 or 2, wherein said inhibition or reduction in the growth of the cell comprises apoptosis.

Claim 11. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent and telomerase inhibitory agent are administered serially.

Claim 12. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent and telomerase inhibitory agent are administered concurrently.

Claim 13. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent and telomerase inhibitory agent are administered in any order.

Claim 14. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent or telomerase inhibitory agent, is administered as a timed-release formulation.

Claim 15. (Original) The method of claim 14, wherein said telomere damage-inducing agent and telomerase inhibitory agent are both administered as a timed-release formulation.

Claim 16. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent or telomerase inhibitory agent, is administered locally.

Claim 17. (Original) The method of claim 16, wherein said telomere damage-inducing agent and telomerase inhibitory agent are both administered locally.

Claim 18. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent or telomerase inhibitory agent, is administered systemically.

Claim 19. (Original) The method of claim 18, wherein said telomere damage-inducing agent and telomerase inhibitory agent are both administered systemically.

Claim 20. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent or telomerase inhibitory agent, is administered regionally.

Claim 21. (Original) The method of claim 20, wherein said telomere damage-inducing agent and telomerase inhibitory agent are both administered systemically.

Claim 22. (Original) The method of any one of claims 1 or 2, wherein said cell is in a human.

Claim 23. (Original) The method of any one of claims 1 or 2, wherein said telomere damage-inducing agent is paclitaxel, or a derivative thereof.

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Claim 24. (currently amended) The method of any one of claims 1 or 2, wherein said telomerase inhibitory agent is a ~~nucleotide~~ nucleoside analog, or derivative thereof.

Claim 25. (withdrawn) The method of any one of claims 1 or 2, wherein said telomerase inhibitory agent is an antisense nucleic acid corresponding to a telomerase

Claim 26. (currently amended) The method of claim 24, wherein said nucleoside analog is AZT in a dose of no more than about 0.24 mg/kg/day.

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Claim 27. (currently amended) The method of claim 24, wherein said nucleoside analog is d4T in a concentration of at least about 20 micromolar.

Claim 28. (Original) The method of any one of claims 1 or 2, wherein said agent selected from the group consisting of telomere damage-inducing agent and telomerase inhibitory agent, is administered as a subtherapeutic dose.

Claim 29 (withdrawn). A method of identifying an agent that inhibits or reduces the growth of a cell by inducing telomere damage in said cell comprising,
contacting a cell with an agent; and
determining if telomere damage has occurred to identify thereby an agent that inhibits or reduces growth of a cell.

Claim 30 (withdrawn). A method of identifying an agent or agents that inhibits or reduces the growth of a cell comprising,
contacting a cell with at least one agent and determining if telomere damage has occurred; and
contacting a cell with the same or at least one other agent and determining if a reduction in telomerase activity has occurred, whereby an agent or agents, alone or in combination, that are determined to induce telomere damage and inhibit telomerase activity, are indicated as an agent or agents that inhibits or reduces the growth of a cell.

Claim 31 (withdrawn). An agent or agents identified according to the method of claim 30.

Claim 32 (withdrawn). A pharmaceutical composition comprising an agent or agents identified according to the method of claim 30, and a pharmaceutically acceptable carrier.

Claim 33 (currently amended). A method of inhibiting or reducing the growth of a cell comprising:
contacting a cell with at least one agent and determining if telomere damage has occurred;
contacting a cell with the same or at least one other agent and determining if a reduction in telomerase activity has occurred, whereby an agent or agents, alone or in combination, that are determined to induce telomere damage and inhibit telomerase activity, are indicated as an agent or agents that inhibits or reduces the growth of a cell; and
administering to a cell a therapeutically effective amount of ~~an~~ the identified agent or ~~agents identified according to the method of claim 30.~~

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Claim 34 (currently amended). A method of treating aberrant cell growth in a mammal comprising:

contacting a cell with at least one agent and determining if telomere damage has occurred;

contacting a cell with the same or at least one other agent and determining if a reduction in telomerase activity has occurred, whereby an agent or agents, alone or in combination, that are determined to induce telomere damage and inhibit telomerase activity, are indicated as an agent or agents that inhibits or reduces the growth of a cell; and

administering to a mammal a therapeutically effective amount of an the identified agent or agents identified according to the method of claim 30.

Claim 35 (original). The method of claim 34 wherein said mammal is a human.

Claim 36 (withdrawn). A composition suitable for inhibiting or reducing the growth of a cell comprising,
a therapeutically effective amount of telomere damage-inducing agent; and
a therapeutically effective amount of telomerase inhibitory agent.

Claim 37 (withdrawn). An article of manufacture comprising,
a vial containing a purified telomere damage-inducing agent and a purified telomerase inhibitory agent; and
instructions for use.


Claim 38 (withdrawn). The article of claim 37, wherein said purified telomere damage-inducing agent and purified telomerase inhibitory agent are packaged in separate vials.

Claim 39 (withdrawn). The method of claim 37, wherein said purified telomere damage-inducing agent and purified telomerase inhibitory agent are formulated in a pharmaceutically-acceptable carrier.

Claim 40. (currently amended) A method of treating cancer in a patient comprising,
administering a therapeutically-effective amount of a telomere damage-inducing agent to said patient wherein such agent causes damaged or shortened telomeres within 24 hours or prior to the initiation of the apoptosis cascade, or causes telomere damage followed by a transient increase in telomerase activity; and

administering a therapeutically-effective amount of a telomerase inhibitory agent to said patient, such that treatment of the cancer is achieved.


Claim 41 (currently amended). The method of claim 40, wherein the method further comprises identifying a patient having, ~~or about to have,~~ cancer.

 Claim 42. (currently amended) A method of treating cancer in a patient comprising, obtaining an agent selected from the group consisting of a telomere damage-inducing agent wherein such agent causes damaged or shortened telomeres within 24 hours or prior to the initiation of the apoptosis cascade, or causes telomere damage followed by a transient increase in telomerase activity, and a telomerase inhibitory agent; administering a therapeutically-effective amount of said telomere damage-inducing agent to said patient; and administering a therapeutically-effective amount of a telomerase inhibitory agent to said patient, such that treatment of the cancer is achieved.

Claim 43 (currently amended). The method of claim 42, wherein the method further comprises identifying a patient having, ~~or about to have,~~ cancer.

Claim 44 (original). The method of any one of claims 40 or 42, wherein said telomere damage-inducing agent is paclitaxel, or a derivative thereof.

Claim 45. (currently amended) The method of any one of claims 40 or 42, wherein said telomerase inhibitory agent is a ~~nucleotide~~ nucleoside analog, or derivative thereof.

 Claim 46. (currently amended) The method of claim 45, wherein said ~~nucleotide~~ nucleoside analog is AZT.

Claim 47. (currently amended) The method of claim 45, wherein said ~~nucleotide~~ nucleoside analog is d4T.

Claims 48-89 (withdrawn).

Claim 90 (new). The method of claim 24, wherein said nucleoside analog is d4T in a dose that produces at least about 20 micromolar plasma concentration in a subject.

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Claim 91 (new). The method of any one of claims 26, wherein said telomere damage-inducing agent is paclitaxel, or a derivative thereof, and the ratio of the AZT concentration to the telomere damage-inducing agent concentration is about 40:60 of their respective therapeutic concentrations.

Claim 92 (new). The method of any one of claims 26, wherein said telomere damage-inducing agent is paclitaxel, or a derivative thereof, and the ratio of the AZT concentration to the telomere damage-inducing agent concentration is about 40:60 of their respective therapeutic doses.
